WHAT IS CLAIMED IS:

1. A flexible drill comprising a drilling tip, and capable of orienting the drilling tip at a predetermined position after accessing a material to be drilled through a substantially straight passage having a long axis;

where the predetermined position is at least 10° off of the long axis of the substantially straight passage.

2. The flexible drill of claim 1, further comprising a lower sub-assembly connected to an upper sub-assembly, where the upper sub-assembly comprises the drilling tip.

3. The flexible drill of claim 2, where the lower sub-assembly comprises a spin luer lock, a retainer tube, a piston anchor, a piston level, a piston, a distal O-ring and a proximal O-ring; and

where the upper sub-assembly further comprises a guiding tube, a barrel knob, a barrel, a threaded adapter, a liner, a bearing housing, a flexible shaft, a distal bearing, a proximal bearing, a collet, a bearing cap and a motor receptacle.

4. The flexible drill of claim 2, where the upper sub-assembly comprises a guiding tube comprising a proximal segment having a central axis and a distal segment having a distal end;

where the drilling tip is connected to the distal end of the distal segment; and

where the guiding tube comprises a substance that has been processed to return to a shape such that the distal segment has a radius of curvature sufficient to cause the drilling tip at the end of the distal segment to orient at between about 10° and 150° off of the central axis of the proximal segment when the guiding tube is not subject to distortion.

5. The flexible drill of claim 2, where the upper sub-assembly comprises a guiding tube comprising a proximal segment having a central axis and a distal segment having a distal end;

where the drilling tip is connected to the distal end of the distal segment; and

where the guiding tube comprises a substance that has been processed to return to a shape such that the predetermined position of the drilling tip is at least 10° off of the long axis of the substantially straight passage.

6. The flexible drill of claim 1, further comprising a guiding tube comprising a proximal segment having a central axis and a distal segment having a distal end;

where the drilling tip is connected to the distal end of the distal segment; and

where the guiding tube comprises a substance that has been processed to return to a shape where the distal segment has a radius of curvature sufficient to cause the drilling tip at the end of the distal segment to orient at between about 10° and 150° off of the central axis of the proximal segment when the guiding tube is not subject to distortion.

7. The flexible drill of claim 1, further comprising a guiding tube comprising a proximal segment having a central axis and a distal segment having a distal end;

where the drilling tip is connected to the distal end of the distal segment; and

where the guiding tube comprises a substance that has been processed to return to a shape such that the predetermined position of the drilling tip is at least 10° off of the long axis of the substantially straight passage.

8. The flexible drill of claim 1, further comprising a guiding tip attached to the drilling tip.

9. The flexible drill of claim 1, further comprising an axial channel for accepting a guide wire.

10. A flexible drill comprising a guiding tube having a proximal segment having a central axis and a distal segment having a distal end; and

a drilling tip is connected to the distal end of the distal segment;

where the guiding tube comprises a substance that has been processed to return to a shape where the distal segment has a radius of curvature sufficient to cause the drilling tip at the end of the distal segment to orient at between about 10° and 150° off of the central axis of the proximal segment when the guiding tube is not subject to distortion.

11. The flexible drill of claim 10, further comprising a guiding tip attached to the drilling tip.

12. The flexible drill of claim 10, further comprising an axial channel for accepting a guide wire.

13. A flexible drill comprising a lower sub-assembly connected to an upper sub-assembly;

where the lower sub-assembly comprises a spin luer lock, a retainer tube, a piston anchor, a piston level, a piston, a distal O-ring and a proximal O-ring; and

where the upper sub-assembly comprises a drilling tip, guiding tube, a barrel knob, a barrel, a threaded adapter, a liner, a bearing housing, a flexible shaft, a distal bearing, a proximal bearing, a collet, a bearing cap and a motor receptacle;

where the guiding tube comprising a proximal segment having a central axis and a distal segment having a distal end;

where the drilling tip is connected to the distal end of the distal segment; and

where the guiding tube comprises a substance that has been processed to return to a shape where the distal segment has a radius of curvature sufficient to cause the drilling tip at the end of the distal segment to orient at between about 10° and 150° off of the central axis of the proximal segment when the guiding tube is not subject to distortion.

14. The flexible drill of claim 13, further comprising a guiding tip attached to the drilling tip.

15. The flexible drill of claim 13, further comprising an axial channel for accepting a guide wire.

16. A method of drilling a material, comprising:

a) providing a flexible drill according to claim 1;

b) advancing the drill through a substantially straight passage until the drilling tip accesses the material to be drilled, thereby orienting the drilling tip at the predetermined position; and

c) actuating the drill.

17. The method of claim 16, further comprising passing a guide wire through the drill either before actuating the flexible drill, after actuating the flexible drill, or both before and after actuating the flexible drill.

18. The method of claim 16, where the material to be drilled is selected from the group consisting of bone, cartilage and intervertebral disk.

19. The method of claim 16, further comprising inserting a sheath into the substantially straight passage before inserting the flexible drill and then inserting the flexible drill through the sheath.

20. A method of drilling a material, comprising:

a) providing a flexible drill according to claim 10;

b) advancing the flexible drill under distortion into the material;

c) removing the distortion from the flexible drill; and

d) actuating the flexible drill.

21. The method of claim 20, further comprising passing a guide wire through the flexible drill either before actuating the flexible drill, after actuating the flexible drill, or both

before and after actuating the flexible drill.

22. The method of claim 20, where the material to be drilled is selected from the group consisting of bone, cartilage and intervertebral disk.

23. A method of drilling a material, comprising:

a) providing a drill according to claim 13;

b) advancing the flexible drill under distortion into the material;

c) removing the distortion from the flexible drill; and

d) actuating the flexible drill.

24. The method of claim 23, further comprising passing a guide wire through the flexible drill either before actuating the flexible drill, after actuating the flexible drill, or both before and after actuating the flexible drill.

25. The method of claim 23, where the material to be drilled is selected from the group consisting of bone, cartilage and intervertebral disk.

26. A cutting device comprising a blade connected to the distal end of a flexible shaft;

where the cutting device can be inserted into a material to be cut after accessing the material through a channel comprising a substantially straight proximal section having a long axis and a distal section having a long axis; and

where the long axis of the distal section is curved, or where the long axis of the distal section is substantially straight but varies at least about 10° off of the long axis of the proximal section.

27. The cutting device of claim 26, where the blade pivots from a first, insertion position to a second, cutting position.

28. The cutting device of claim 27, further comprising a locking sleeve surrounding at least part of the flexible shaft;

where the blade has one or more than one notch;

where the locking sleeve can be advanced distally and retracted proximally; and

where advancement distally causes the locking sleeve to engage with the one or more than one notch, thereby locking the blade into the cutting position, and retraction proximally causes the locking sleeve to disengage from the one or more than one notch, thereby unlocking the blade from the cutting position.

29. The cutting device of claim 28, further comprising a sheath having a beveled

distal end and surrounding at least part of the flexible shaft;

where the flexible shaft can be advanced distally and retracted proximally relative to the sheath; and

where retraction proximally of the flexible shaft causes the blade to disengage from the locking sleeve and pivot to the insertion position.

30. The cutting device of claim 26, where the blade has a circumferential cutting edge.

31. The cutting device of claim 26, further comprises:

a proximal end comprising a motor adapter for connecting the cutting device to a motor drive; and

a distal end, where the blade is attached.

32. A cutting device comprising:

a) a pivoting blade connected to the distal end of a flexible shaft; and

b) a locking sleeve surrounding at least part of the flexible shaft;

where the blade pivots from a first, insertion position to a second, cutting position;

where the blade has one or more than one notch;

where the locking sleeve can be advanced distally and retracted proximally; and

where advancement distally causes the locking sleeve to engage with the one or more than one notch, thereby locking the blade into the cutting position, and retraction proximally causes the locking sleeve to disengage from the one or more than one notch, thereby unlocking the blade from the cutting position.

33. The cutting device of claim 32, further comprising a sheath having a beveled distal end and surrounding at least part of the flexible shaft;

where the flexible shaft can be advanced distally and retracted proximally relative to the sheath; and

where retraction proximally of the flexible shaft causes the blade to disengage from the locking sleeve and pivot to the insertion position.

34. The cutting device of claim 32, where the cutting device can be inserted into a material to be cut after accessing the material through a channel comprising a substantially straight proximal section having a long axis and a distal section having a long axis; and

where the long axis of the distal section is curved, or where the long axis of the distal section is substantially straight but varies at least about 10° off of the long axis of the

proximal section.

35. The cutting device of claim 32, where the blade has a circumferential cutting edge.

36. The cutting device of claim 32, further comprising:

a proximal end comprising a motor adapter for connecting the cutting device to a motor drive; and

a distal end, where the blade is attached.

37. A method of cutting a material comprising:

a) providing the cutting device of claim 26;

b) inserting the cutting device into the material after accessing the material through a channel comprising a substantially straight proximal section having a long axis and a distal section having a long axis; and

c) actuating the cutting device;

where the long axis of the distal section is curved, or where the long axis of the distal section is substantially straight but varies at least about 10° off of the long axis of the proximal section.

38. The method of claim 37, further comprising advancing and retracting the cutting device withing the material.

39. The method of claim 37, further comprising inserting a sheath into the channel before inserting the cutting device, and inserting the cutting device through the sheath.

40. A method of cutting a material comprising:

a) providing the cutting device of claim 32;

b) inserting the cutting device into the material;

c) advancing the locking sleeve distally to engage with the one or more than one notch, thereby locking the blade into the cutting position;

d) actuating the cutting device;

e) deactuating the cutting device;

f) retraction the locking sleeve proximally to disengage from the one or more than one notch, thereby unlocking the blade from the cutting position; and

g) removing the cutting device from the material.

41. The method of claim 40, where inserting the cutting device comprises advancing the cutting device through a channel comprising a substantially straight proximal section

having a long axis and a distal section having a long axis; and

where the long axis of the distal section is curved, or where the long axis of the distal section is substantially straight but varies at least about 10° off of the long axis of the proximal section.

42. The method of claim 40, further comprising advancing and retracting the cutting device withing the material.

43. The method of claim 40, further comprising inserting a sheath into the channel before inserting the cutting device, and inserting the cutting device through the sheath.

44. An enucleation device comprising:

a) a proximal end;

b) a distal end comprising a cutting cap comprising a plurality of deformable blades; and

c) a shaft between the proximal end and the cutting cap;

where the plurality of deformable blades can cut material in a space when the blades not deformed, after accessing the space through a passage while the blades are deformed; and

where the passage has a smaller cross-sectional area than the lateral cross-sectional area of the undeformed blades while the blades are cutting the material.

45. The enucleation device of claim 44, where the shaft is flexible.

46. The enucleation device of claim 44, further comprising an axial guidewire lumen between the proximal end and the distal end.

47. A method of cutting material in a space, comprising

a) providing the enucleation device of claim 44;

b) accessing the space with the enucleation device; and

c) actuating the device, thereby effecting cutting of the material.

48. The method of claim 47, further comprising:

deforming the blades before actuating the device, and accessing the space through a passage while the blades are deformed;

where the passage has a smaller cross-sectional area than the lateral cross-sectional area of the undeformed blades while the blades are cutting the material.

49. The method of claim 47, where the passage is curved.

50. The method of claim 47, further comprising advancing and retracting the cutting device in the space to cut additional material.

51. The method of claim 47, where accessing the space comprises advancing the cutting device over a guide wire.

52. The method of claim 47, where the material cut is selected from the group consisting of intervertebral disk and vertebral body endplate material.

53. The method of claim 47, where accessing the space comprising advancing the enucleation device through a transpedicular access passage in a vertebra.

54. A method of cutting material in a space, comprising:

a) providing the enucleation device of claim 44;

b) creating a passage to access the space;

c) deforming the blades to fit through the passage;

d) advancing the enucleation device through the passage until the cutting cap passes into the space, thereby allowing the blades to expand to their undeformed shape; and

e) actuating the enucleation device, thereby effecting cutting of the material;

where the passage has a smaller cross-sectional area than the lateral cross-sectional area of the undeformed blades while the blades are cutting the material.

55. The method of claim 54, further comprising advancing and retracting the cutting device in the space to cut additional material.

56. The method of claim 54, where advancing the cutting device through the passage comprises advancing the cutting device over a guide wire.

57. The method of claim 54, where the passage is curved.

58. The method of claim 54, where the material cut is intervertebral disk.

58. The method of claim 54, where the material cut is vertebral body endplate material.

60. The method of claim 54, where the passage is a transpedicular access passage in a vertebra.

61. A fusion agent containment device for containing a fusion agent comprising a band or mesh of thin, biocompatible, deformable material having shape memory configured to expand into a substantially circular or oval shape when undeformed.

62. The fusion agent containment device of claim 61, further comprising a biocompatible sealant coating the band.

63. A method of fusing two adjacent vertebrae comprising:

a) creating a chamber within the intervertebral disk space between two adjacent

vertebrae;

b) providing a fusion agent containment device according to claim 61;

c) placing the fusion agent containment device within the chamber, thereby allowing the fusion agent containment device to expand;

d) filling the fusion agent containment device with a fusion agent; and

e) allowing the fusion agent to fuse the two adjacent vertebrae.

64. The method of claim 63, further comprises additionally fusing the two adjacent vertebrae with a second procedure.

65. A distraction system for distracting two adjacent vertebrae comprising:

a) an introducer comprising a proximal insertion portion and a distal anchoring portion comprising a plurality of barbs; and

b) a plurality of deformable, spacing components;

where each spacing component has a central opening and a plurality of extensions; and

where each spacing component configured to stack onto the insertion portion of the introducer.

66. The distraction system of claim 65, where the plurality of extensions is selected from the group consisting of three extensions and four extensions.

67. A method of distracting a superior vertebra from an inferior vertebra comprising:

a) providing the distraction system of claim 65;

b) creating a chamber between the superior vertebra and the inferior vertebra;

c) placing the distraction system in the chamber, thereby distracting the superior vertebra from an inferior vertebra.

68. The method of claim 67, where placing the distraction system is performed bilaterally.

69. The method of claim 67, where placing the distraction system comprises placing the distraction system through a channel created through the pedicle of the superior vertebra.

70. The method of claim 67, where placing the distraction system comprises placing the distraction system through a sheath or hypotube, within a channel created through the pedicle of the superior vertebra.

71. A distraction system for distracting two adjacent vertebrae comprising:

a) a proximal connecting portion;

b) a distal distracting portion comprising a plurality of strips;

where each strip is deformable from an extended configuration to a curled configuration;

where each strip has a proximal end and a distal end;

where the proximal end of the strips are joined to the proximal connecting portion connected at their proximal end to the proximal connecting portion.

72. The distraction system of claim 71, where the proximal connecting portion comprises mesh.

73. The distraction system of claim 71, where each strip tapers from the proximal end to the distal end.

74. A method of distracting a superior vertebra from an inferior vertebra comprising:

a) providing the distraction system of claim 71;

b) creating a chamber between the superior vertebra and the inferior vertebra;

c) placing the distraction system in the chamber, thereby distracting the superior vertebra from an inferior vertebra.

75. The method of claim 74, where placing the distraction system is performed bilaterally.

76. The method of claim 74, where placing the distraction system comprises placing the distraction system through a channel created through the pedicle of the superior vertebra.

77. The method of claim 74, where placing the distraction system comprises placing the distraction system through a sheath or hypotube, within a channel created through the pedicle of the superior vertebra.

78. A distraction system for distracting two adjacent vertebrae comprising:

a) a barbed plug having a central axis and comprising a central portion and a plurality of barbs;

b) a ratchet device having a central axis and comprising a series of transversely separated strips connected at one end;

where the barbs extend outward from the axial center of the barbed plug when undeformed, and contract toward the axial center of the barbed plug when deformed;

where the strips uncoil away from the central axis of the ratchet device when undeformed, and contract toward the axial center of the ratchet device when deformed.

79. A method of distracting a superior vertebra from an inferior vertebra comprising:

a) providing the distraction system of claim 78;

b) creating a chamber between the superior vertebra and the inferior vertebra;

c) placing the distraction system in the chamber, thereby distracting the superior vertebra from an inferior vertebra.

80. The method of claim 79, where placing the distraction system is performed bilaterally.

81. The method of claim 79, where placing the distraction system comprises placing the distraction system through a channel created through the pedicle of the superior vertebra.

82. The method of claim 79, where placing the distraction system comprises placing the distraction system through a sheath or hypotube, within a channel created through the pedicle of the superior vertebra.

83. A method for treating diseases and conditions that change the spacial relationship between a first vertebral body of a first vertebra, a second vertebral body of a second vertebra adjacent the first vertebra, and a first intervertebral disk between the first vertebral body and the second vertebral body, or that cause instability of the vertebral column, or both, and a method that allows the surgeon to access the first intervertebral disk to restore a more normal three-dimensional configuration of the first intervertebral disk between the first vertebral body and the second vertebral body, the method comprising:

a) selecting a patient;

b) obtaining transpedicular access to the first intervertebral disk by creating a channel through a pedicle of the first vertebra; and

c) removing at least part of the first intervertebral disk through the transpedicular access.

84. The method of claim 83, where the patient selected has one or more than one change in the spacial relationship between the first vertebral body of the first vertebra, the second vertebral body of the second vertebra adjacent the first vertebral body, and the first intervertebral disk between the first vertebral body and the second vertebral body; and

where the change in the spacial relationship causes one or more than one symptom selected from the group consisting of pain, numbness and loss of function, or where the change in the spacial relationship causes real or potential instability, or a combination of the preceding.

85. The method of claim 83, where the patient has one or more than one disease or

condition selected from the group consisting of degeneration of the first intervertebral disk, herniation of the first intervertebral disk, degeneration and herniation of the first intervertebral disk, degenerative scoliosis, an infection of the first intervertebral disk, an infection of the first vertebral body, an infection of the second vertebral body, a space occupying lesions, spinal stenosis, spondylosis, spondylolisthesis, vertebral instability, a vertebral fracture, and a surgical manipulation of the vertebral column.

86. The method of claim 83, where obtaining transpedicular access to the first intervertebral disk is accomplished bilaterally.

87. The method of claim 83, where obtaining transpedicular access to the first intervertebral disk comprises inserting a bone biopsy needle through one pedicle of the first vertebra to create the channel.

88. The method of claim 83, where obtaining transpedicular access to the first intervertebral disk comprises inserting a non-flexible bone drill through one pedicle of the first vertebra to create or enlarge the channel.

89. The method of claim 83, further comprising inserting a sheath into the channel.

90. The method of claim 83, further comprising inserting a retainer tube into the channel.

91. The method of claim 83, further comprising inserting a first flexible drill through the channel and actuating the flexible drill, thereby extending the channel through the first vertebral body and into the intervertebral disk.

92. The method of claim 91, where the first flexible drill is a flexible drill according to claim 1.

93. The method of claim 91, where the first flexible drill is a flexible drill according to claim 10.

94. The method of claim 91, where the first flexible drill is a flexible drill according to claim 13.

95. The method of claim 91, further comprising inserting a second flexible drill through the channel and actuating the flexible drill, thereby enlarging the channel.

96. The method of claim 95, where the second flexible drill is a flexible drill according to claim 1.

97. The method of claim 95, where the second flexible drill is a flexible drill according to claim 10.

98. The method of claim 95, where the second flexible drill is a flexible drill according to claim 13.

99. The method of claim 83, further comprising inserting a guidewire into the channel for use as a support structure.

100. The method of claim 83, further comprising performing at least part of the method using an over-the-wire technique.

101. The method of claim 83, further comprising removing at least part of the first intervertebral disk using a cutting device.

102. The method of claim 101, where the cutting device is a cutting device according to claim 26.

103. The method of claim 101, where the cutting device is a cutting device according to claim 32.

104 The method of claim 83, further comprising removing at least part of the first intervertebral disk using an enucleation device.

105. The method of claim 104, where the enucleation device is an enucleation device according to claim 44.

106. The method of claim 83, further comprising removing at least part of an endplate of the first vertebral body or an endplate of the second vertebral body.

107. The method of claim 83, further comprising inserting a fusion agent containment device into the intervertebral disk, and at least partly filling the fusion agent containment device with a fusion agent.

108. The method of claim 107, where the fusion agent containment device is a fusion agent containment device according to claim 61.

109. The method of claim 83, further comprising inserting a distraction system into the intervertebral disk, and allowing the distraction system to distract the first vertebral body from the second vertebral body.

110. The method of claim 109, where the distraction system is a distraction system according to claim 65.

111. The method of claim 109, where the distraction system is a distraction system according to claim 71.

112. The method of claim 109, where the distraction system is a distraction system according to claim 78.

113. The method of claim 83, further comprising fusing the first vertebra to the second vertebra through the transpedicular access.

114. A method of fusing a first vertebra to a second vertebra comprising:

a) performing the method of claim 83;

b) fusing the first vertebra to the second vertebra through the transpedicular access; and

c) performing a second fusion procedure to fuse the first vertebra to the second vertebra.

115. The method of claim 83, further comprising removing, through the transpedicular access, at least part of a second intervertebral disk between the second vertebral body and a third vertebral body adjacent to the second vertebral body.